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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,328	03/12/2004	Takao Ishikawa	500.43624X00	6136
20457 7590 04/05/2007 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER PATTERSON, MARC A	
			ART UNIT 1772	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/798,328	ISHIKAWA ET AL.	
	Examiner	Art Unit	
	Marc A. Patterson	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

NEW REJECTIONS

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8 – 10, 12, 16 and 19 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohta et al (U.S. Patent No. 5,954,866).

With regard to Claim 8, Ohta et al disclose a coating solution (water – soluble resin in water; column 3, lines 10 – 11) which contains an element comprising carbon (carbon black, therefore comprising the element carbon; column 4, lines 60 – 62), a copper compound (column 4, line 64), and an element comprising iron (iron oxide; column 4, line 64); the element is a pigment (column 4, line 64), and is therefore a catalyst for color change; the element is therefore a catalyst component; however, the claimed aspect of the element being a catalyst component is directed to an intended use and is therefore given little patentable weight; the claimed aspect of the coating solution being for producing a ceramic tube is also directed to an intended use and is also given little patentable weight.

With regard to Claims 9 and 12, the coating solution comprises an organic material comprising an acrylic resin (column 2, lines 48 – 49).

With regard to Claim 10, the coating solution contains chlorine (polyvinyl chloride, therefore comprising the element chlorine; column 7, lines 52 – 53).

With regard to Claim 16, the copper compound is a pigment (column 4, line 59) and is therefore a promoter of coloring, and is in the form of a salt comprising copper oxide (column 4, line 64).

With regard to Claims 19 – 20, Ohta et al do not disclose a component other carbon, copper and iron components; the coating solution disclosed by Ohta et al therefore consists of carbon, copper and iron components.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866).

Ohta et al disclose a coating comprising a copper compound and a catalyst, both comprising pigments, as discussed above. Ohta et al fail to disclose an elementary copper / catalyst ratio of 1 to 0.5 by weight. However, because the copper compound and catalyst are pigments, it would have been obvious for of ordinary skill in the art to vary the amounts of copper compound and catalyst through routine experimentation to obtain the desired pigmentation.

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5. Claims 13 – 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866) in view of Robinson et al (U.S. Patent No. 4,487,747).

Ohta et al disclose a pigment as discussed above. With regard to Claims 13 – 14 and 18, Ohta et al fail to disclose a pigment comprising iron chloride and copper chloride.

Robinson et al teach pigments comprising metal chloride for the purpose of using pigments that are also useable in metallurgy (column 1, lines 10 – 13). One of ordinary skill in the art would therefore have recognized the advantage of providing for the metal chlorides of Robinson et al in Ohta et al, which comprises a pigment, depending on the desired use of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for pigments comprising metal chloride, therefore iron chloride and copper chloride in Ohta et al in order to obtain pigments that are also useable in metallurgy as taught by Robinson et al.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866) in view of Nishihara et al (U.S. Patent No. 5,017,231).

Ohta et al disclose a pigment as discussed above. Ohta et al fail to disclose a pigment comprising alkoxide.

Nishihara et al disclose a pigment comprising alkoxide (column 2, lines 34 – 42) for the purpose of obtaining a pigment having excellent heat resistance (column 1, lines 8 – 11). One of ordinary skill in the art would therefore have recognized the advantage of providing for the

alkoxide of Nishihara et al in Ohta et al, which comprises a pigment, depending on the desired heat resistance of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a pigment comprising alkoxide in Nishihara et al in order to obtain a pigment having excellent heat resistance as taught by Nishihara et al.

ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 8 – 10, 12, 16 and 19 – 20 as being anticipated by Ohta et al (U.S. Patent No. 5,954,866), 35 U.S.C. 103(a) rejection of Claim 17 as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866), 35 U.S.C. 103(a) rejection of as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866) in view of Robinson et al (U.S. Patent No. 4,487,747) and 35 U.S.C. 103(a) rejection of Claim 15 as being unpatentable over Ohta et al (U.S. Patent No. 5,954,866) in view of Nishihara et al (U.S. Patent No. 5,017,231), of record on page 2 of the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 7 of the remarks dated December 15, 2006, that Ohta et al do not disclose a coating solution for producing ceramic tubes, or a catalyst component.

However, as stated above, the claimed aspect of the element being a catalyst component is directed to an intended use and is therefore given little patentable weight; the claimed aspect of the coating solution being for producing a ceramic tube is also directed to an intended use and is also given little patentable weight.

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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc A. Patterson 4/2/07
Marc A. Patterson, PhD.
Primary Examiner
Art Unit 1772